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JUNE, 1927

FOOD AND HEALTH EDUCATION

An Open Forum for Home Economics Workers

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FOOD AND HEALTH EDUCATION

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The Home Economist as a Beneficent Censor

HALF truths, dressed in imperfect English often masquerade as scientific information. Although the teacher herself will not be affected one way or another by such statements, she may find that misleading articles in the press, for example, are tending to minimize the good results of her own teaching. The parents of her pupils may easily be influenced by the "Diet Talks" or "Food Lessons" appearing in the daily paper, and their minds will thus be far from receptive when the children discuss what they have learned along the same line at school.

It may point our moral, even though it will in no wise adorn our tale, to cite a few concrete examples. A "Health Series" now afforded wide-spread circulation contains such choice bits as:

"The essential point to remember when attempting to cure by food is *not to build up the body by food in order to resist disease, but to take away those foods which have been interfering with health!*"

There at one blow is swept away one of the fundamental principles of good nutrition. Obviously, any food which has been "interfering with health" will be at least temporarily discontinued, but to build resistance by means of well chosen diet is a cardinal principle of health teaching.

Then comes:

"Our tables are always loaded with an excess of carbohydrate foods, which are the ones least needed for building and repairing body structure."

Granted, but what about the energy required to drive the well built body along its daily pathway way? This constitutes a typical example of the pernicious effect of "a little knowledge."

Here is another:

"Years ago when I was a confirmed vegetarian, it was my good fortune to come across a book written by Dr. Salisbury, an English physician. . . . The writer claimed to cure practically every ailment by placing the patient on a Dietetic Regime (shades of the dictionary!) consisting of ground round steak and raw vegetables. . . . I was agreeably surprised to find such diseases as rheumatism and Bright's disease disappear rapidly under this strange treatment. . . . Excess food fermentation is avoided in the absence of any starches or sugars. . . . *If other diet systems have not helped you try this.*"

Fermentation may be reduced by a diet "system," but what about the far more deadly putrefaction. Furthermore, think what risks the average person runs who adopts any "systems" without medical examination as to the state of his excretory organs!

Glancing on down the page one comes upon this:

"The most satisfactory *cure* for constipation is to take one or two enemas daily, using one quart of water at each enema."

The article then proceeds to advocate this procedure for any and every one suffering from constipation. Not a word about the logical and normal method of restoring intestinal action by means of carefully selected diet. Indiscriminate use of enemas might even *cause* complete cessation of normal action, and there is no word of warning as to *wise* use of this device. But let us proceed.

"A few years ago these views (on raw foods) were at least partially upheld by *researches* (again the International!) conducted by modern nutritional laboratories."

With such airy persiflage does the author dispose of the brilliant work on vitamins that is so wonderfully transforming our methods of dietary teaching!

Calculated to alarm the uninformed is the lurid statement that:

". . . The feces loaded with vicious toxins (*are* toxins vicious?) *will burn into the membranes* and produce larger ssures."

Now it is evident that such statements as these are made in all sincerity, and that they will be read by many who are eager for practical information. Because of these facts is it not our duty to do what we can to minimize the actual menace to health this and similar material?

In class rooms where the students have arrived at years of discretion, the teacher may discuss the question with all frankness. Lessons may be planned having for their theme the estimating of the true worth of such material. This will involve previous drill in funda-

(Continued on Page 91)

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The Use of Posters in Nutrition Work

By Alice Fisher Loomis

The American CHILD HEALTH Association, New York City

Editor's Note — We have received so many requests for poster material that we asked The American CHILD HEALTH Association to cooperate by presenting a survey of the field. Although one of the cuts used to illustrate this article has already been published in FOOD AND HEALTH EDUCATION, we are reproducing it again as it served so well to illustrate Miss Loomis's article. Our readers are invited to send for the catalogue, "Some Posters on Child Health," The American CHILD HEALTH Association, 370 Seventh Avenue, New York City.

ENDLESS discussion has surrounded the proper definition of the poster and the chart. Webster says the former is "a bill or placard, often of a decorative character, intended to be posted in a public place," in contradistinction, no doubt, to a chart, which is "a sheet of paper, pasteboard or the like on which information is given in tabular form."

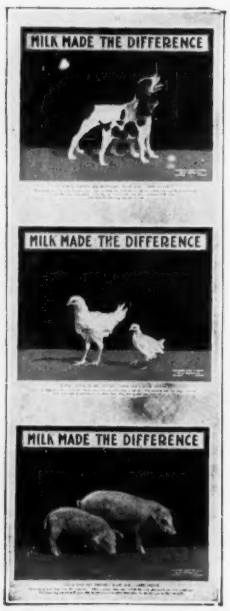
Other people are more abitrary and say that a poster is not a poster unless its message can be taken in at one glance, unless it deals with a single subject or unless it gets its point over. A chart seems to have the privilege of going more into detail, of presenting facts that require study before they can be assimilated and perhaps of showing the processes through which the single statement on the poster is arrived at.

Nutrition workers, teachers, and other people, both professional and lay, from time to time, have to use posters and charts in their work, but do not happen to know where to turn to find them. To such it may be useful to comment on some of the posters included in the list* prepared by the American CHILD HEALTH Association on the subject of child health and reprinted here by special permission.

The foreword to this list states that it does not pretend to be comprehensive but aims rather to give a few convenient references. Addressing the class room teacher it claims that "probably more effective than any printed posters are the ones worked out by the children themselves as an expression of health ideas they have received in the class room." We all know that children learn best by doing and this is true also of the less mental among grown-ups. There are times and places, however, where learning by doing is not practicable and where the poster with its appeal to the eye and the imagination may be a valuable means of driving home a truth.

Since a good state of nutrition is dependent on a number of factors it would seem that a chart rather than a poster would be needed to present the general idea of a well nourished body, though a poster might well be used to encourage the drinking of milk, for instance, or the wearing of straight-last shoes.

A good example of a nutrition chart is that published by the Philadelphia Child Health Society in which good nutrition is represented as the hub of a wheel, the spokes of which are:



Courtesy of the National Dairy Council

Physical examination and correction of defects.
Proper mental attitude.
Personal and home hygiene.
Correct posture.
Regulated exercise and play.
Plentiful sunshine and fresh air.
Proper elimination.
Correct eating habits.
Sufficient food in proper balance.
Adequate sleep and rest.

In an explanatory leaflet the society says that this chart "is the outgrowth of many different experiments to give a broad conception of nutrition and its relation to health, to students and all kinds of professional people whose field is positive health as well as ill health. It aims to indicate that good nutrition, like good health, is the by-product of daily practices of right habits of living and thinking." A lay person, also conning this poster, may perhaps realize for the first time that food alone will not nourish a child if he is denied sunshine or adequate sleep or is suffering from some defect. This lesson is in itself well worth learning. The best of us are apt to lose sight of some one of the "spokes" or to let ourselves be carried away by enthusiasm for our own pet hobby. How much easier for the untrained parent or the inadequately trained teacher to overlook some of the numerous factors contributing to good nutrition.

Let us take the matter of the *physical examination* and the subsequent *correction of remedial defects*. The physical examination of child or adult before he is sick is still not the custom; we are not yet convinced that prevention is better than cure. Yet defects not noticeable to the parent may be retarding the child's growth and keeping him from the health he might enjoy. We often hear a mother exclaim, "I don't know what's the matter with that child; I can't get him to eat a thing." It is true she does not know, but all the time it is possible that a physical examination might reveal the cause. It is probable that in a large percentage of such cases some physical defect is at the root of the trouble.

No poster on the value of a periodic examination appears on the list, but the National Health Council, New York, has a poster which it sells for 10c inviting everyone to have a health examination on his birthday!

As far as the regular weighing of children can serve as a record of their development this is encouraged by the charming poster of the National Dairy Council called "Guard Your Child's Health—Watch His Weight," showing as it does nurse and mother weighing a little child who has perhaps just stepped out of his bath, or who has at any rate been stripped for the occasion.

The nurse or teacher who weighs school children may like to know more about the Classroom Weight Record of The American CHILD HEALTH Association. This has space for the names of forty children with a record of their weight every month of the school year, and of their age, height and the average weight for that age and height three times—at entrance in September, at midyear, and at the close of school.

*Single copies of this list may be secured from The American CHILD HEALTH Association on request.

Care is taken to use the word "average" rather than "normal." Among the suggestions to teachers is the recommendation that children shall be allowed to write in their own weights to increase their interest in their growth and so make of the monthly weighing a handy peg on which to hang health instruction.

The next "spoke" we come to, that of *proper mental attitude*, is not one that can very well be reduced to poster form. It is one, nevertheless, that can not be ignored. There is probably no single factor more important for either child or adult than a mind tuned to cheerfulness and joy rather than harassed by small cares or imaginary fears. To will is to do; if we can implant in our children's minds a desire for health, the practice of health habits will be undertaken with enthusiasm; they will cease to be a duty or a bore.

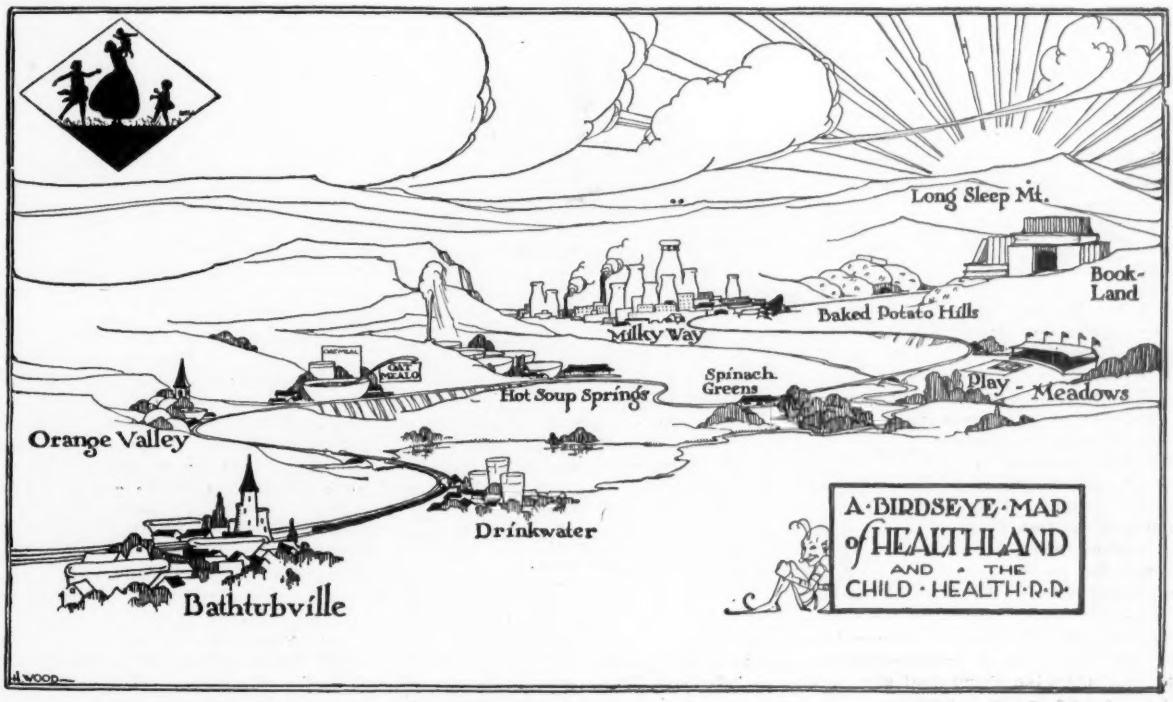
Personal and home hygiene being concrete in nature, are well represented in the poster list. The hygiene of the baby's day is sketched in a selection of posters from those published by the National Child Welfare Association, each one of them containing printed advice as well as teaching in graphic form. For the children in the primary and intermediate grades the Health Series of the Association for Improving the Condition of the Poor presents in delightful silhouette form habits of personal cleanliness, exercise and sleep, and of correct eating. No child could fail to be charmed with the bunnies, dark against the full moon, busily nibbling the feathery carrot tops. Each poster in the series carries a single lesson and can be taken out and used while that particular habit is the subject of instruction or the center of interest. With the younger children, especially, it is better to focus attention on one or two habits at a time, and wherever possible let the events of the day throw light on that particular habit and its value.

The Chicago Tuberculosis Association has a primary health habit chart which has space for the names of fifty pupils and for the marking of them on the performance of a single habit daily for four weeks; or for one week, if four habits are being recorded at one time—the teacher writing in the name of the habit or habits at the top. The Folder of Suggestions for keeping the chart is a useful guide to the primary teacher and among other things names a number of health behavior habits both for in school and out of school, separating them into those two classifications.

The Map of Healthland, published by The American CHILD HEALTH Association has guided the steps of innumerable children in the quest of healthful behavior. The kindergarten and first grade can use it as a sand table project, building up its fields and cities of plastecene or clay or even of such natural objects as fruits, milk bottles, toy bathtubs, and the like. For the intermediate grades there is plenty of information in an amusing form in the "See Healthland First" folder that supplements the map. Its sayings and train schedules can be studied and such test questions put as: "Study the Healthland Flyer and decide how you could improve your noon meal," "Why is a lettuce leaf a good insurance policy?", "Show with your toothbrush how the housewives of Healthland did their sweeping." There is opportunity here for a great variety of activities, correlated work and direct instruction.

Suitable health posters for the junior high school age are scarce and teachers will be glad to know of those published by the Michigan Department of Health which clothe the health habits with a becoming seriousness and dignity. The one on cleanliness, for instance, shows a Roman draped in his toga standing looking down into one of the famous Roman baths, and could naturally be made to tie up with the history lesson.

Correct posture has a section to itself on the poster list and shows several sources from which posters on this subject may be obtained. Those from the Children's Bureau are the newest and are one expression of its recent study of this subject, other fruits of which are a two-reel film on posture and a 33-page pamphlet entitled "Posture Exercises." The charts, which were planned by Dr. Armin Klein on the basis of extensive observation of school children, are intended for the use of



Courtesy of The American CHILD HEALTH Association

physicians, nurses, physical education teachers, athletic directors and clinics. They recognize that posture standards must be considered in relation to the physical type, and each chart shows four silhouette figures illustrating excellent, good, poor and bad posture for one type of boy or girl—either thin, intermediate or stocky. The experiment has been tried of having the older school children score each other on their posture, using these charts as standards.

Exercise and play, fresh air and sunshine, and sleep and rest seem to have less than their due of emphasis in this list of posters, although these subjects receive attention in various sets of posters on health habits. Fresh air and exercise, for the baby at least, are mentioned under the name of the National Child Welfare Association and posters on this subject for older children can be obtained from the same source.

"Open Windows Bring Good Health," published by the National Tuberculosis Association, shows such a charming presentment of a young girl, her dress blowing in the breeze from the window, as would make anyone want to live in airy rooms. We need as joyous and convincing a poster on the value of sunshine, or perhaps there is one that the writer has never found.

The Bureau of Education gives us a quiet poster—and sleep should be quiet—showing a child asleep with the moon peeping in at her through the open window. A table below shows the number of hours of sleep children of different ages should have. The required number of hours for older children also appears on the sleep poster of the Michigan Department of Health, following the emphatic words "Sleep before midnight is best."

Posters on *food and food habits* are plentiful, whether for the child or for the adult. There are, perhaps, few more effective ways of demonstrating the importance of the kind rather than the quantity of food than the pictures of animals showing marked differences in growth on account of differences in their diet. Such is the poster of the National Dairy Council picturing two puppies, two chickens and two pigs—the disparity in size and appearance between the brothers in each pair being very convincing. If the pictures are not enough, exhibits of live rats can be secured from the same source—to show that "milk makes a difference."

With the same purpose in view the United States Department of Agriculture has prepared a set of photographic prints showing the effects of adequate and inadequate diets for animals and children. These, however, do not confine themselves to differences in growth, but show some of the pathological results of malnutrition, and so are more suited to the adult than the child. The department does not stop there, but prepares also sets of food-composition and meal-planning charts that give constructive help to the housewife.

The Postum Cereal Company has worked out a chart showing the food values of an average serving of certain food materials. For each food it gives the amount of one serving by measure and weight; the tissue building factors, with the per cent this serving gives of the daily requirement of protein, calcium, phosphate and iron for adults; the growth and health factors, with vitamins A, B, and C; and the energy factors, giving the caloric values of the protein, fat and carbohydrate of the food as well as the total calories. Notes below the table explain its use and give the standard estimated number of calories and amounts of tissue building food required daily by adults.

The food charts of the American Medical Association are on much the same plan, each chart showing the amounts of iron, calcium and vitamins respectively in a variety of foods.

There are some foods that need more emphasis in our national diet than they usually receive and as helping these foods to take their proper place the two sets of posters put out by the National Dairy Council called "Best Foods for Health" and "Food for Strong Teeth" will be useful. Each set gives the foods most needed in the pre-natal period, the years from two to six, and the years from six to sixteen. Young children are encouraged in the eating of the right foods for strong teeth, as well as in mouth hygiene, by a set of comic posters very appealing to their age, prepared by the American Dental Association.

There are a number of other posters to encourage children to eat the right foods for health, but these are found scattered among the different sets encouraging the practice of health habits, thus mutely, perhaps, confirming the statement quoted above from the description of the Philadelphia nutrition chart that "Nutrition, like good health, is the by-product of daily practices of right living and thinking."

A Student Home Economics Club

By Lucy E. Torson

Head of Department of Home Economics, State Teachers' College, Conway, Arkansas

THE Student Home Economics Club of the Arkansas State Teachers' College is in the second year of its existence and has proved a strong factor in unifying the work of the department. Its aims are threefold: To promote the interests of the department, to provide an organization for social contacts, and to stimulate interest in state and national developments along home economics lines.

This club holds meetings every two weeks, has occasional parties and sponsors various school projects. Last year the programs covered a wide range of subjects.

A health program consisted of a talk on diet and health for the college girl. A beauty table showed in a novel fashion the importance of certain foods. A girl's dressing table, prettily arranged, had foods representing cosmetics, as a carrot for lipstick, etc., and one of the girls explained how beauty can be enhanced by right diet.

A second outstanding program dealt with the pre-school child. Informal talks dealt with various phases of physical care and habit training and one girl illustrated her talk on play by arranging a very interesting exhibit of toys suitable for children of various ages.

Another effective program was arranged by members of the class in historic costume. Inexpensive costumes were made illustrating various periods from Elizabethan and Colonial dress. A talk on pleasant costumes was made interesting by posters showing their influence on modern dress.

Some of the programs were suggestive of the season of the year, as was the Christmas one. One girl gave a demonstration on Christmas candies and passed out mimeographed copies of recipes; another showed dainty ways of wrapping gifts while a third girl showed how various things from the nearby woods could be used for house or table decorations.

This year it has been necessary for the club to meet in two sections and each has been following its own program. One section is studying the pre-school child using the study outline prepared by Dr. Lois Hayden Meek for the American Association of University Women. The other section is studying vocations for women and has had several women from town speak on such subjects as The Woman Florist; Nursing as a Vocation and the Woman Dress Designer.

One project undertaken during the year has been the maintaining of a work room in one of the sewing laboratories, open to all dormitory girls. This has proven popular, especially during the fall when the girls fit up their rooms and in the spring when many girls replenish their wardrobes at small expense.

An emergency rest room has been made more attractive by the addition of a cretonne cover for the cot, bright pillows, painted chairs and two

framed prints from Godey's Lady's Bool. This room contains a mending basket and a cabinet with various first aid and emergency supplies.

In addition to working on some of our own problems the club is affiliated with the state and national Home Economics Association and tries to keep in touch with their programs of work. Food sales have been held to earn money for the State Scholarship Loan Fund. We also observed Ellen H. Richards Day by having ten minute talks given by different girls in each class in the department throughout the day.

We feel that a student club is especially necessary in a teachers college, that young teachers, going out into small communities, may feel the importance of keeping in touch with the home economics movement as a whole and know what new tendencies are developing in the field.

The Vassar Institute of Euthenics

By Annie Louise Macleod

Director Institute of Euthenics, Vassar College

Editor's Note—True to our aim of presenting a certain amount of more or less general material, stories of new movements, that our readers may have the stimulating experience of relating their every day lessons to these activities, we here offer an unusually significent paper by Professor Macleod. Home economists who are keen to help in the development of that science will realize that euthenics has many features in common with their own subject. The fact that several home economics women are on the staff of the new Institute proves that. They will follow Miss Macleod's story inspired afresh by the thought that their instruction forms one unit in an ever widening field, that wherein the workers are devoted to the improvement of life and living conditions. Thoughtful reading of the following paper can scarcely fail to result in new courage and new ideas.

MANY, though unfortunately not all, home economics trained women are familiar with Ellen Richards' stimulating book "Euthenics, the Science of the Controllable Environment." In that book Mrs. Richards explains the meaning of this new word which she introduced from the Greek euthenia. "The betterment of living conditions, through conscious endeavor, for the purpose of securing more efficient human beings is what the author means by euthenics," and again "Euthenics deals with race improvement through environment, precedes eugenics, developing better men now, and thus inevitably creating a better race of men for the future... seeks to emphasize the immediate duty of man to better his condition by availing himself of the knowledge already at hand."

When Vassar College proposed to introduce into the curriculum a new major course designed to apply scientific knowledge to the complex problems of adjustment between individual and environment, the name, Euthenics, roughly translated as "efficient living," was chosen to express as concisely as possible the varying aspects and aims of this course.

Scarcely had the announcement been made that such a course was being planned for, when demands came for some method of disseminating information along these lines among our graduates. "We are the ones who need it most," they said. "We know by experience how vital these problems are." And so gradually the idea of a summer Institute of Euthenics shaped itself in our minds, designed to offer an opportunity for the study of those principles of mental and physical hygiene and of economics which lead to more satisfactory individual adjustments and contribute toward the solution of the problems of the homemaker.

The subject matter as a whole was arranged under the general heads

I. Family Relationships
  A. Husband and Wife
  B. Motherhood
    1. Child Hygiene
      a. The hygienic routine
      b. Nutrition
      c. Recreation
      d. Children's diseases, prevention, care and after effects
    2. Child Psychology
      a. Child Development
      b. Behaviour Problems
  C. The Father in the Family
  D. Individual Adjustments
    1. Mental Hygiene
      a. Social relations
      b. Environmental influences
      c. Recreation
    2. Nutrition
    3. Economics
  E. The Family in the Eyes of the Law
II. The Family as an Economic Unit
  A. Production
    1. Service
    2. Labor
      a. Household technology
      b. Cookery
      c. Home nursing
      d. Horticulture
  B. Consumption and Utilization
    1. The family finances
    2. The time factor
  C. The Family in Relation to the Community

The work was carried on by a small (but very select!) resident staff, including Mrs. Chase Going Woodhouse of the Bureau of Home Economics, Washington; Mrs. Gladys Beckett Jones of the Garland School of Homemaking, Boston; Miss Edith Nason of the College of Home Economics, Cornell; Miss Ruth Andrus and Miss Flora Thurston of the Institute of Child Welfare, Teachers College, Columbia University. Their work was supplemented by a long list of visiting lecturers, specialists in the various fields, among whom were Dr. W. R. P. Emerson, Mrs. Mary S. Rose, Dr. Walter H. Eddy, in nutrition; Dr. Thomas Salmon, Dr. Frankwood Williams and Dr. G. V. Hamilton in mental hygiene; Dr. E. R. Groves in sociology; Miss Katharine Fisher in household management; and Miss May Van Arsdale in cookery.

Since we were anxious to adapt the Institute to the needs of all classes of college women, it was necessary to make some arrangement for the care of children during the course so that their mothers might attend without feeling that they were neglecting their duties. Accordingly, a nursery school was established which served not only as a satisfactory means of solving the problem for the mother, but also as a demonstration of the modern methods of child care.

Perhaps the most remarkable thing about the group who gathered together on the opening day of the Institute was its variety. Forty-two "pioneers" registered for the full four weeks and about as many more made shorter visits, varying from a week-end to a month. There were eighteen colleges and universities represented. Fifteen registrants were Vassar graduates; Barnard, Wellseley, Bryn Mawr and Radcliffe sent one each; Smith, two. The rest were, for the most part, graduates of state universities. As to the geographical distribution, there was one student from Kansas, Nebraska, Mississippi, North Carolina, Wisconsin, New Hampshire, two each from Missouri, Texas, Massachusetts,

and West Virginia, three from Connecticut, five from New Jersey, seven from Pennsylvania and the rest from New York State. There were thirty married and ten single women; two were home economics teachers, two teachers in other lines, two women's club officials and two social service workers. Eighteen had children here and eight more had children too old for the nursery school. Rather to our disappointment, the business or professional woman was absent from our lists, but we felt better about it when a few who dropped in to see what we were doing, became so intrigued that they left, vowing to return at the first opportunity! Representatives of the press were with us almost constantly, newspaper women (and occasionally men), free lance writers, and special writers from women's magazines. Husbands came for week-ends, perhaps to make sure that we were not corrupting their wives, and an occasional fiance appeared rather shyly. A mother and daughter came together and a charming great grandmother convinced us that her share in the bringing up of three generations was equal to a college degree. The delightful and rather surprising thing was that all seemed to be equally happy and eager for work; even an untimely heat wave was powerless to damp their enthusiasm. Still more delightful is the fact that their enthusiasm has stood the test of time, as shown by the numbers who plan to return for part or all of the time this coming summer, and the extent to which "we are advertised by our loving friends."

What did they get in return for their investment of time and money? I must let them speak for themselves as to that.

"I should say that it has quite definitely given me the thing I needed most. That's my feeling about it. The test of course will be if my family can discern a change in my attitude through the days and weeks of next winter. I dare say all of us start the business of homemaking with high heart and fine ideals, resolved never to be submerged by the humdrum details of housekeeping. But the pressure seems to be too great and we let ourselves be gradually pounded down until our eyes can't be lifted above the pan of potatoes we are paring or the bed we make. I feel I not only have regained a sense of values but a bit of technique in managing and operating a house so as to place the emphasis where it belongs. I have learned many new things, particularly about the guidance of a child, and can see plainly enough where I was on the wrong track."

"It has given me the vision I desired, has provided an interest in and authentic information on various subjects invaluable to me as a homemaker of the future and as a dynamic force in a community."

"The courses in Mental Hygiene have helped me to understand myself, and to realize more completely my adjustment to individuals and to society. Without undue introspection, I believe that I am better able to face reality and to make my decisions than I was a month ago. The courses in the technique of homemaking, in its various ramifications, have given me an entirely new angle on the dignity and importance of this fundamental part of our lives. It has been a real awakening to me to find that so many college women are engaged in the profession of teaching homemaking. I have had a real thrill in realizing that there is an Art of Cookery, and that there is a satisfactory means of self-expression through the process of creating a culinary masterpiece from dough and suitable accessories."

"It has thrilled me to know that woman can know success outside her home, owing to the intelligent manipulation of efficiency measures which we have been given in this course. I realize how real her emancipation from petty, unprofitable labor will become under the new regime allowing her full opportunity for cultural or economic pursuits—or both. I have seen the tyrant drudgery, which has bullied every woman since her wedding day, finally routed and I am as thrilled as the Greeks at the fall of Troy."

"I had need also for help in personal integration, improvement of health intelligence factors, better adjustment to my husband and marital information. I needed advice as to the conservation of my energy, time and money and the possibility of supplementing our income. All of my needs have been met and in addition I have received much practical help on methods, my self confidence is restored and the month's experiences and education will be, I hope, the basis of a new poise and the inspiration for future accomplishment."

"The Institute has given me what I sought—a better understanding of the younger generation's solution of their inherited problems, and their interpretation of life. In brief, I feel better equipped for cooperation, and a forward look, under changing social and economic conditions."

"The Institute has given me a new point of view in homemaking. I now have the desire to make it one of my professions."

And, now that we are on the eve of the second Institute, we have been encouraged to extend our efforts still further. The nursery school has been enlarged to the utmost limit. A group of thirty, two to four year olds, and a primary group of five to nine year olds, under the direction of skilled leaders will demonstrate the ideals and methods of progressive education. A few additional courses have been added as last year's experience seemed to suggest their desirability, and we are more definitely urging men as well as women to attend, in order that the common problems may be discussed together. How successful we may be, only time will tell. Meantime we are full of hope and enthusiasm.

An Idea for Rural Teachers

By a *FOOD AND HEALTH EDUCATION* Staff Member

A Class Room in Motion

The Pursuit of Knowledge

"BECAUSE they would be without means of learning their ABC's unless opportunities afforded them by a special school train provided by the Canadian Pacific in cooperation with provincial authorities, Canadian school children in some regions that are as yet scarcely built up are instructed in class rooms fitted out in the interior of a regular pullman car. Except for the fact that there are but two rows of desks, the inside of the car with its maps and nature studies is not greatly different from the rooms in schools in larger cities.

"The little tots of a former generation who walked long miles to the little red school house have nothing on the Canadian children of today who wend their way over long dis-

tances through snow and ice to get to school in Ontario. Being a school on board train, however, children are perhaps more eager to reach it than they would were it in a less romantic setting."

The above is a quotation from a news item that accompanies the two illustrations reproduced herewith. Although the plan as here worked out is for the benefit of more or less snow bound children of the north, it would seem reasonable to suppose that the idea might be adapted for the use of rural communities in any section.

A school train that plied over daisied roads, that children of outlying districts might receive instruction is something to think about.

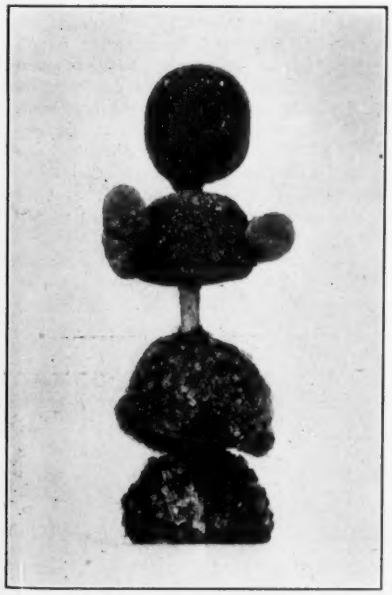
If home economics teachers wish to adopt a modification of the idea it would probably be quite possible to enlist the cooperation of local roads to the further extent of having one car fitted with dining car equipment. Cooking adequate meals within a small space affords many an opportunity for worth while lessons in nutrition and household management.

A Gum Drop Project

By a *FOOD AND HEALTH EDUCATION* Staff Member

WINDOW shopping again, with O, such fascinating results!

Peering out from the window of a



Aunt Chloe in Process of Manufacture

smart confectioner on Fifth Avenue was Brer Rabbit to the life!

"He simply must go into FOOD AND HEALTH EDUCATION," I murmured rapturously, as I dashed into the shop. Whereupon my enthusiasm grew, for there beside another figure of Brer Rabbit was an adorably portly and wise looking elephant, apparently just having stepped out of the "Just So Stories," a snubnosed Red Riding Hood, and most attractive of all, Uncle Tom's wife, standing with hands uplifted in characteristically African amazement!

It seems to me that there are a number of tie-ups for the teacher to make with these attractive figures as illustrative material.

First of all will come the nutrition angle, the lesson about purchasing wholesome sweets, of which gum drops are a good example.

Then, as the manufacture of the different figures progressed, as a class exercise in finger work, the young sculptors might enjoy thinking up their favorite characters in fiction, so that each figure might have a name. The ones I suggested at the beginning of this brief comment by no means exhaust the list of possibilities. As each character is chosen the youngsters will enjoy reading and discussing the stories, as well as the lives of the authors.

Perhaps the next lesson will have to do with costume design, although it is admitted that neither Red Riding

All Dressed Up

Hood nor Uncle Tom's wife is wearing the latest creation of the Rue de la Paix! But cutting and pasting the little skirts, Red Riding Hood's cape and hood and Chloe's apron and cap will afford small fingers quite an opportunity for practice. In the figures before me, Red Riding Hood is made

Little Red Riding Hood

of red gum drops, except her face, which is yellow, Chloe of black. The latter's skirt is lavendar, her cap and kerchief yellow and her apron white.

Speaking of colors, Brer Rabbit's lower extremities are rose color, his middle orange and green, his face and ears green, while the back of his head is dark red! The elephant combines colors in much the same fashion.

One other point at which construction is varied is this: the two doll figures are composed entirely of gum drops, as will be seen if the illustrations are carefully examined, while the animals have spools as base.

If hands are immaculate the children may be allowed to eat the completed animals, although the two dolls had better be reserved as exhibit material, since the various crepe papers used in fashioning their garments are of many colors and unwholesome dye stuffs might get off on the fingers of the workers.

As a final touch, a knitting needle should be heated and the eyes and nose of each doll "pricked," in the sugar. The same process is followed in the case of the elephant's spectacles, the heat of the needle being sufficient to caramelize the sugar, thus giving the effect of lenses.

The construction of the animals is so simple that photographs have not been made of their component parts. Aunt Chloe, on the other hand, has been undressed, her garments photographed separately, so as to show her own gum drop body and the pattern for making her apron, kerchief and cap.

The School Dining Room

By Arlien Beardsley

Supervisor, Home Economics, Orangeville, Pennsylvania

IF you have ever tried to eat a meal in a dining room which was untidy, dingy and in great need of repair and decoration, you will easily see just how difficult a problem it was in our school to teach foods in its various phases of planning, serving, and balancing meals in a way to promote health. This situation came about when we organized a new school four and one-half years ago, and because we could not have all our desires satisfied at one time—the dining room was put off for a couple of years until other equipment could be placed.

Funds were still low and therefore we searched for second-hand furniture. We discovered in the school building some old chairs which resemble the Windsor chair so popular today. Then we found a second hand oak table, but the biggest problem of all was to secure a buffet suitable to be used with the other pieces and in the rather small dining room. At last we purchased an unfinished buffet which suited our conditions.

Now we were ready to tackle the job of refinishing. With a mixture of starch and Banner lye we removed all of the old varnish and paint. We then filled the cracks and bruises with putty and sandpapered the whole surface, until it was very smooth. We were then ready to apply our ground coats of paint which were made necessary by the different kinds of wood. When the ground coats were dry we applied our

A Table Ready for Service

mahogany finish—and finally, when all was firm and dry, we rubbed each surface with wax until we had a most attractive suite of dining room furniture.

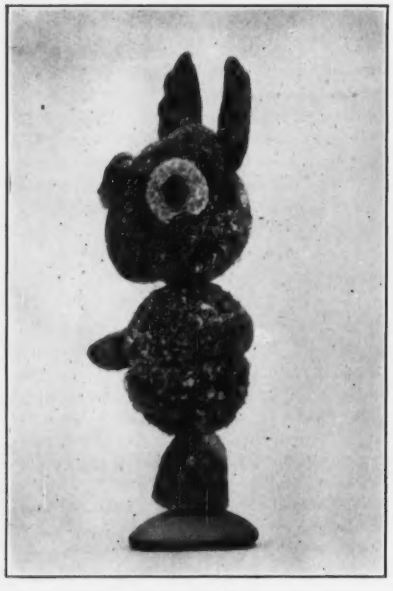
Bare windows no longer looked well with our furniture and so we made and put up dainty ruffled curtains of white scrim with old-blue over drapes. We made a cover of terry cloth in old blue and rose tones for the radiator. Then an attractive luncheon set made in Italian hemstitching added to our whole scheme another touch of home.

All this work was done by the Home Economics girls and since they have worked so hard to accomplish their purpose they are always eager to serve a meal in their dining room. Of course here is where our health and the dining room problem combine—because who can deny the fact that meals eaten in pleasant surroundings digest much more easily and taste better than those eaten in unpleasant surroundings? This fact has been noted by scientists who have experimented on animals. We all know the effect of a dark day on our attitude toward our fellow men, and an ugly dining room is worse than a dark day for our digestion. What girl is there who does not want her home and her meals to be as attractive as those of her friends?

We aim to make these meals which the girls plan and serve good examples of simple nourishing foods easily within reach of everyone's purse and ability to prepare.

We also try to help the girls to keep a happy disposition while meals are in progress.

The whole project has cost us only about sixty dollars, but we feel that we have already received more than sixty dollars' worth of value in our food habits.



Brer Rabbit

Ready to Ask Questions

Aunt Chloe's Wardrabe

It seems to me that one advantage of window shopping for teaching ideas lies in allowing the children themselves to take part in such expeditions. It is a worth while exercise of the creative imagination, the possibilities of which will vary, it is true, but almost every child possesses it to a certain degree.

THE STORY OF FOOD AND FOOD PRODUCTS

Supplementary Reading for Food Study Classes

The Story of Vitamins in Evaporated Milk*

By Thurston L. Johnson and John F. Norton

Department of Hygiene and Bacteriology, The University of Chicago

RAW Milk is known to contain the antineuritic and antiscorbutic vitamins known respectively as Vitamin B and Vitamin C. In the preparation of evaporated (canned unsweetened condensed) milk, the vitamins are subjected to the action of heat. It, therefore, becomes desirable to know the fate of these vitamins. Although some published work

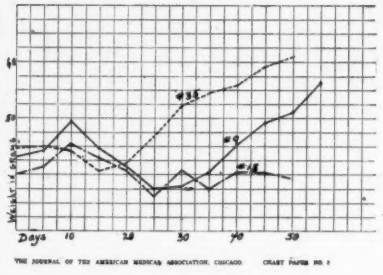


Figure 1.
Effect of Adding Milk to Diet of Polyneuritic Rats.
No. 9. 8 cc. Raw Milk added to diet after 25 days.
No. 13. 8 cc. Evaporated Milk added to diet after 25 days.
No. 35. 10 cc. Evaporated Milk added to diet after 18 days.

is available, it seemed best to reinvestigate the questions involved.

Antineuritic Vitamin

Hopkins (1, 2) first demonstrated the presence of the antineuritic vitamins in milk. Osborne and Mendel(3) showed that this growth promoting substance was present in protein free milk and was water soluble. A short exposure to heat had no apparent effect. The effect on the vitamin B content of milk, of longer heat treatment at temperatures ranging from 60° C to 125° C has been studied by McCollum and Davis(4), Gibson and Concepcion(5), Osborne and Mendel(6), Daniels and Stuessy(7), Daniels and Laughlin(8), and Rosenau (9). The results show that although heated milk cannot be used as the sole item in the diet of white rats, when diets deficient in vitamin B are supplemented with heated milk, normal growth is obtained. Daniels and Laughlin(8) and Rosenau(9) tested commercially canned evaporated milks, and the above conclusion applies to this type of heated milk. However, in view of the limited number of investigations with evaporated milks, it appeared desirable to check these results.

Although it has long been suspected that vitamin B was not a single substance, it is only comparatively recently that vitamin D, (the antirichitic vitamin) has been recognized. In order to avoid possible confusion between these two vitamins, a diet was chosen that contained the antirichitic vitamin but did not furnish the antineuritic substance. This diet was based on that recommended by Osborne and Mendel(6) and was obtained from the Harris Laboratories. White rats, weighing from 40 to 60 grams were used as the test animals.

Two methods were employed in the experiments. The first consisted of feeding the rats on the basic diet, devoid of vitamin B, until marked symptoms of polyneuritis developed and then adding evaporated milk to the diet to determine the amount which caused the recovery of the animals. Comparison was made with

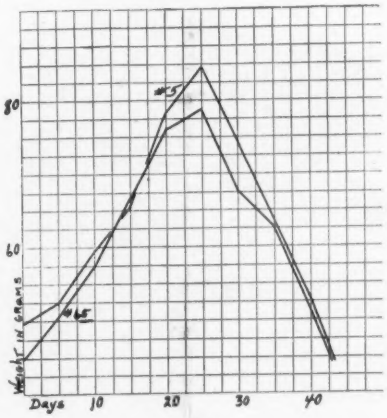


Figure 2.
Effect of Withdrawing Milk from Diet of Rats.
No. 5. 10 cc. Raw milk in diet, withdrawn after 24 days.
No. 65. 10 cc. Evaporated milk in diet withdrawn after 24 days.

raw milk and the experiments controlled with a series of rats which received yeast in their diet. The second method consisted of feeding the basic diet with the addition of evaporated milk; then withdrawing the milk after 29 days and noting the develop-

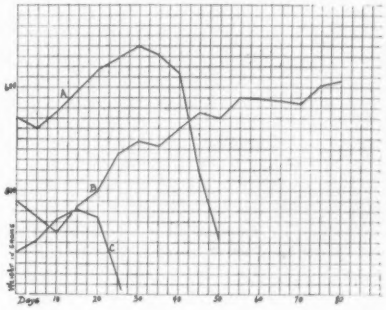


Figure 3.
Control Experiments on Diet
A. Basic ration plus orange juice for 29 days. Then orange juice withdrawn from diet.
B. Basic ration plus orange juice.
C. Basic ration only.

ment of polyneuritis. Controls were fed raw milk. In both series of experiments the animals were weighed daily, in order to follow the normal growth.

Method I. Five groups of 10 rats each were fed on the basic diet, without the addition of vitamin B. Some of the animals gained in weight for about 10 days; others lost weight from the start. In from 18 to 25 days all the rats showed marked evidence of polyneuritis. At this point varying quantities of evaporated milk, diluted with an equal volume of distilled water, were added to the diet. These amounts varied from 6 to 12 cc. daily. Three brands of evaporated milk were used. Similar quantities of raw milk were used and one group of rats was fed with yeast. Typical growth curves are shown in Figure 1. 6 cc. amounts of diluted evaporated milk or of raw milk were not sufficient to cause recovery of the animals. 8 cc. of raw milk allowed the rats to recover and to show a normal growth curve. On this amount of evaporated milk the animals did not recover. 10 cc. quantities of all three brands of evaporated milk as well as of raw milk caused the disappearance of symptoms of polyneuritis and all animals showed a normal growth curve during the following 25 days, after which ob-

**This study was made under a fellowship established by the Evaporated Milk Association.*

servations were discontinued. Since it has been shown that milks vary in their content of vitamin B, the difference in quantity of evaporated and raw milks required for recovery of the animals cannot be regarded as of any significance. No difference was

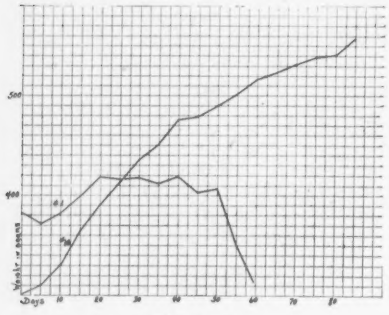


Figure 4.
Effect of Raw Milk in Diet.
No. 1. Basic ration plus 30 cc. of raw milk daily.
No. 10. Basic ration plus 70 cc. of raw milk daily.

observed in the brands of evaporated milk used. Processing, therefore, did not appreciably affect the vitamin B content.

Method II. The same number of white rats was used for these experiments. Quantities of diluted evaporated milks (three brands) and of raw milk varying from 6 to 12 cc. daily were fed in addition to the basic diet. Growth of the animals and symptoms of polyneuritis were noted. The rats receiving 6 cc. of evaporated or raw milk slowly gained in weight for about 3 weeks and then lost weight with simultaneous appearance of polyneuritic symptoms. Animals receiving 8 cc. or more of raw milk showed a normal growth curve. This amount of the diluted evaporated milks was insufficient. With 10 cc. of evaporated milk daily, all animals developed normally. At the end of 23 days, the time required in our first experiments for the development of polyneuritis, the evaporated or raw milk was withdrawn from the diet of all animals. The response in loss of weight was immediate and the rats died in from 35 to 43 days from the beginning of the experiment, with symptoms of polyneuritis, (see Figure 2).

The results obtained in this second series of experiment checked the first series. The processing of evaporated milks had no appreciable effect on the vitamin B content.

Antiscorbutic Vitamin

It is well known that scurvy is the result of a dietary deficiency. The antiscorbutic vitamin concerned is known as vitamin C and is present in fruits, green vegetables, tissues and milk. Frölich(10), and later, Chick, Hume and Skelton(11) demonstrated the protective power of fresh milk against scurvy and also showed that when milk is heated the antiscorbutic vitamin is destroyed. Their results have been verified by Hart, Steenbock and Smith(12). A comparison of the quantities of fresh milk employed by various investigators to protect against scurvy indicates a varied vitamin C content. Barnes and Hume(13) found it necessary to use 100-150 cc. of raw milk to prevent the development of scurvy in guinea pigs on an oats and bran diet. They found that cow's milk in summer had a higher antiscorbutic value than winter milk and explained this difference on the basis of the cow's diet. Hart, Steenbock and Ellis(14) were able to prevent scurvy in guinea pigs on a basic diet of alfalfa hay, rolled oats and salt with 50 cc. of raw summer milk, while 75 cc. of winter milk were required. It must, be recognized, therefore, that raw milk used for the preparation of evaporated milk will vary in its vitamin C content.

Hart, Steenbock and Smith(12) have confirmed the earlier work on the loss of antiscorbutic properties of heated milk. They also report experiments with commercially canned unsweetened milk (evaporated). While control guinea pigs were protected by 30 cc. of raw milk, an average daily consumption per animal of 42 cc. of milk prepared from evaporated milk did not protect. Hess(15) and Hess and Unger(16) and Hume(17) have found that sweetened condensed milk retains much of the antiscorbutic vitamin.

Not only heat but the presence of oxygen may have an influence on the destruction of vitamin C, as shown by Hess(18), La Mer(19) and Eddy(20).

In view of the limited number of experiments with evaporated milk, it seemed desirable to confirm the published work on vitamin C.

Holst and Frölich(21) showed that guinea pigs could be used as experimental animals, since the symptoms of human scurvy could be reproduced. Cohen and Mendel(22), Chick, Hume and Skelton(11), Hart, Steenbock and Ellis(14), Sherman, La Mer and Campbell(23), and Parsons and Hutton(24) have devised satisfactory diets. We have used the basic diet described by Hart, Steenbock and Ellis and consisting of Alfalfa Hay (finely ground and autoclaved ½ hour at 15 lbs. pressure) 15 per cent; Rolled oats 69 per cent; Sodium chloride 1 per cent; Casein 5 per cent.

Guinea pigs weighing between 270 gms. and 450 gms. were selected. Two series of five animals each were fed the basic diet, one series receiving orange juice as a source of vitamin C. The animals receiving the basic diet alone began to lose weight after about two weeks and finally developed the typical symptoms of scurvy. The animals fed orange juice in addition to the basic diet showed a normal growth curve. After the appearance of scurvy in the first series, orange juice was omitted from the diet of three of the five still healthy pigs. These eventually showed the typical symptoms of scurvy. It was therefore evident that the basic diet used was a satisfactory one. Typical weight curves are shown in Figure 3.

The antiscorbutic value of raw milk (certified milk) was determined by adding quantities of the milk, varying from 30 cc. to 70 cc. daily, to the basic diet. The guinea pigs receiving 30 cc. of milk daily increased in weight for about 3 weeks, then gradually lost weight, developed symptoms of scurvy and died in about 60 days. Animals receiving 40 cc. or more of raw milk daily showed a normal growth curve. These pigs were kept under observation for 90 days. Figure 4 shows typical curves for animals given 30 and 70 cc. of milk respectively.

Similar experiments were made with three brands of evaporated milk. In all cases the evaporated milks were diluted with distilled water to make them equivalent to whole milk. Amounts of diluted evaporated milk varying from 30 cc. to 70 cc. were added to the basic diet and fed to guinea

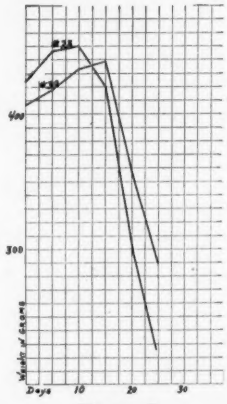


Figure 5.
Effect of Evaporated Milk in Diet.
No. 3. Basic ration plus 30 cc. evaporated milk daily.
No. 30. Basic ration plus 70 cc. evaporated milk.

pigs. The pigs would not consume more than 70 cc. daily. All the animals developed symptoms of scurvy and died within 30 days. Figure 5 shows typical growth curves.

There are no indications of the retention in canned evaporated milk of the antiscorbutic properties of raw milk.

Conclusions

The vitamin B content of evaporated milks is not appreciably less than that of raw milk. No variation in vitamin B content in three brands of evaporated milk was noted.

In the preparation of evaporated milk, vitamin C is reduced to an amount insufficient to be detected with certain experimental animals.

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Editorial

(Continued from Page 81)

mental principles, both of diet and of English composition.

Opportunities for correlation of courses are usually welcomed by many teachers on the staff and a cooperative project such as the one just indicated may be the means of bringing together numerous educational forces.

When the matter has been satisfactorily taken care of in the school organization there arises the question as to how best to pass on the help to the community. May there not be opportunity for cooperation with the local press? Editors are more or less at the mercy of their contributors. Who may they not welcome tactfully put offers of cooperation from home economics workers? Naturally there should be no rough shod riding over matters requiring skill and intelligent handling. The teacher who is socially minded, however, will be quick to see opportunities and will know how to make the most of them for the benefit of all concerned.

When one pauses to reflect that the enthusiastic press agent of the particular specialist one has in mind writes:

"No other kind of advice *is of any value*"—it would seem that the conscientious teacher may have her work cut out for her!

One last quotation:

"Many men have not the courage to turn the door knob of another man's office to seek an interview. *The timidity is due to taking unsuited foods* (too bad that the foods are not suited!) that ferment and poison the blood instead of nourishing brain and nerves. Know the proper combinations of food that will build your nerve and brain cells."

Books of Interest to Teachers

"A Manual In Preliminary Dietetics." By Maude A. Perry. The C. V. Mosby Company, St. Louis. $1.25.

FROM the Montreal General Hospital in Canada comes this practical little manual in dietetics. The book is purposely small so that only principles need be discussed. Following the presentation of principles we find recipes relating to the classes of food discussed at the beginning of each chapter

Perhaps the book's chief value lies in its very brevity. The busy dietitian or nurse will find it helpful in rousing interest and in food study.

"A Primer for Diabetic Patients." By Russell M. Wilder, M.D. W. B. Saunders Company, Philadelphia. $1.50.

IN the third and reset edition of his handbook Doctor Wilder presents his material in very readable and usable form.

He begins by discussing the nature of diseases and follows this discussion with a consideration of the various tests for sugar and diabetic acid in the urine.

The section on weighing foods is of course one of the most important from the standpoint of the patient and this topic is treated with care.

The following section considers the diet itself showing specimen diet orders in hospitals as well a diet sheets for use by the individual.

At this point insulin is taken up and treated briefly and with authority. The latter part of the primer has to do with the planning of diet prescriptions and the reader is definitely instructed that this section is for the physician.

The final section gives recipes with careful directions for weighing, measuring and combining the ingredients. There is a classication of Joslin's table of food values, and the book closes with a discussion of emergency diets. Much of this information also being tabulated.

Used Regularly in the thriftiest and in the wealthiest homes

THERE is no saving in cheap baking powder. The thriftiest housewife knows this best of all. So she always uses Royal.

When she spends her money for fresh eggs and butter, sugar, flour and flavorings,—and spends her own good time—to make a cake, she wants to know her cake will rise properly.

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. . .

AND because money can buy no finer, in the wealthiest homes both mistress and cook insist on Royal. It is recognized all over the world as the finest quality baking powder—the most dependable and the most healthful.

Royal, the Cream of Tartar Baking Powder. Contains no alum; leaves no bitter taste

Suggestions to Teachers Regarding Sources of Material

Editor's Note—To assist teachers in obtaining material published by manufacturers of foods, FOOD AND HEALTH EDUCATION will gladly forward requests from teachers to these manufacturers. If those requesting booklets on which there is a charge, send the cost, FOOD AND HEALTH EDUCATION will gladly forward this, also. Some of the material available in printed form is listed below, each publication being given a key number.

Because of the vast amount of clerical work involved, teachers are asked to send each request on a separate slip of paper, size 4x4 in., giving the key number of the publication and name and address on each separate slip. Enclose slips in an envelope and send to Food and Health Education, 468 Fourth Avenue, New York City.

1. *"Temperature Charts."* Helpful charts, perforated for binding with lesson plans or may be hung on the wall through center perforation. Combination of time and temperature charts, together with standard recipes form quite a complete baking guide for class or home use.

3. *"Lesson Plans."* A set of booklets under the following captions: "Deep Fat Frying"; "Baking Powder Batters and Doughs"; "Cakes, Frostings and Fillings"; "Christmas Suggestions"; "The Muffin Mixture and Its Variations"; "Baking Powder Biscuit and Its Relatives"; "Baking Powder." These are perforated so that they will fit into any note book.

4. *"Tempting Recipes."* Booklet featuring recipes for quick breads and various dessert dishes.

7. *"Feeding the Child for Health."* A good example of how progressive manufacturers are adapting the facts in science to their own educational publicity. Fruit and its place in the diet is the central point of the discussion.

19. *"Production of Powdered Milk."* Wall chart showing process used in commercial preparation of powdered milk.

24. *"Why We Refrigerate Foods."* Pamphlet treating of the reasons underlying food spoilage and why low temperatures retard food decomposition.

27. *"Reliable Recipes."* A seventy-five-page cook book prepared by the domestic science department of a large baking powder company. Recipes include directions for preparing all dishes in which baking powder is used. Material is well arranged.

40. *"Nationally Known Recipes."* A fifty-page booklet showing how powdered milk may be used in soups, fish, sauces, salad dressings, breads, and candies. More than thirty organizations, manufacturers, educators and magazine editors cooperated in the making of the booklet.

41. *"To the Teacher."* Booklet showing how to visualize to classes facts about powdered milk. An educational wall chart showing process of manufacture of powdered milk will also be sent free to teachers.

42. *"Surprise Recipes."* A collection of recipes featuring powdered lemon juice (not lemon extract), printed in convenient form for use in a recipe-filing cabinet.

43. *"To the Teachers of Home Economics and Dietetics."* A booklet showing the place of powdered milk in bread making.

72. *"Modern Bread."* Leaflet answering the following questions: what

(Continued on page 94)

Have You A Desk Copy of the "MANUAL of COOKERY"?

Each of the twelve chapters which comprise the Manual of Cookery includes a study of the preparation of a certain type of food, together with a collection of tested recipes. These chapters were originally published in leaflet form, one at a time, by the Procter & Gamble Company. As a matter of convenience we have collected the twelve leaflets and bound them in a stiff covered, loose-leaf binder.

Teachers of cooking classes (either adults or children) will find this bound desk copy extremely useful. We shall be pleased to mail you a copy upon receipt of 25 cents in stamps. The coupon below is provided for your convenience in asking for it. (A set of the 12 leaflets, unbound, will be mailed free.)

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WHERE our grandmothers labored with oil lamps, we snap on an electric light. We use a lot of things they didn't know about. We know many things which they didn't know. Because of things they didn't know, they had ideas which to-day we call prejudices.

For instance, they had prejudice against food in cans. We know now, on the word of the greatest scientific authorities, that food in cans is as safe as food can be. We know that the can doesn't harm the food. We know that the sealed, air-tight can is a guarantee of freshness and purity and cleanliness—that we can now get in cans a safer, more convenient and more wholesome supply of food than any people ever before had in the history of the world.

Have you brought your milk supply up to date? You need to *know* that the milk you use is pure, and fresh, and sweet, and always absolutely clean. You need to know that it contains, always, all the food elements of milk—all the substances which make milk nature's most perfect food. We do know to-day that Evaporated Milk guarantees all these essential qualities. We know that it is one of the modern accomplishments through which science has given us safer, better foods.

Evaporated Milk is pure milk. Nothing is added to preserve it. Not a thing is taken from it but some of the water which is the greater part of all milk. All the food qualities of the milk are kept in it. None of them is harmed in any way.

Always fresh and sweet and absolutely clean. The milk is produced under the supervision of experts on farms in the best dairying sections of America. It is received in sanitary plants in the country within a few hours after it comes from the cow—while it is fresh and sweet. It is carefully tested for purity and cleanliness. Then part of the water is removed—it is concentrated. Finally, it is put in air-tight containers and sterilized—protected from everything that can impair its freshness and sweetness and purity. In this condition it comes to your pantry—fresh and sweet and absolutely clean.

With better richness. 60% of the water of cows' milk is removed in making Evaporated Milk. The food (solid) content of Evaporated Milk is, therefore, more than twice as great as in ordinary milk. And *every drop* of Evaporated Milk contains *all* the food elements of milk. There is no cream line. The cream *never* separates. It stays in the milk. Evaporated Milk is *never* skimmed milk. It is always more-than-double rich in butterfat and *also* in the bone and tissue-building substances—in all the elements which make milk nature's most perfect food.

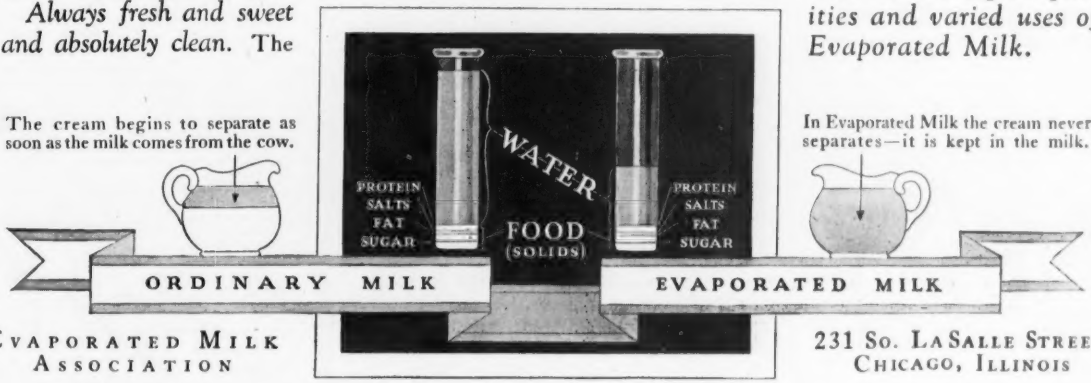
Wherever you need milk or cream, Evaporated Milk will *better* fill the need.

Undiluted Evaporated Milk serves in place of cream—at less than half the cost of cream. It can be diluted to suit any milk need, and costs less than ordinary milk. Grocers everywhere have it.

Let us send you our free booklets telling you more about the good qualities and varied uses of Evaporated Milk.

The cream begins to separate as soon as the milk comes from the cow.

In Evaporated Milk the cream never separates—it is kept in the milk.



EVAPORATED MILK ASSOCIATION

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CHICAGO, ILLINOIS

MANUAL OF HOMEMAKING. By Martha Van Rensellaer, Flora Rose and Helen Canon. $3.25

A small encyclopedia of the housekeeper's art and science. It has practical suggestions for every phase of home work, from the line of beauty in a house or a hat to the correct methods of cooking and preserving. The authors have been careful to present the principles rather than the details of their subjects. It has many illustrations.

HOME AND FARM FOOD PRESERVATION. By William V. Cruess. $1.50

This volume tells the "why" of the various methods of food preservation, presents labor-saving devices and gives simple and explicit directions that may be easily followed. There are three main divisions in the text: Principles of Food Preservation, Methods of Food Preservation, Food Preservation Recipes.

THE FOOD PROBLEM. By Vernon Kellogg and Alonzo E. Taylor. With a preface by Herbert Hoover. $1.75

A book which sets out the character and scope of the food problem which faced the United States in 1917. It deals with the methods which European countries have used to control food, and has chapters on the physiology and sociology of nutrition, grain and alcohol, patriotism and food, etc.

FOOD, HEALTH AND GROWTH. By L. Emmett Holt, M.D. $1.50

Those who wish to know just how children should be fed cannot afford to be without this book, written by a former Professor of Diseases of Children in the College of Physicians and Surgeons, New York, and Physician-in-Chief to the Babies Hospital, New York.

THE NEWER KNOWLEDGE OF NUTRITION (Revised Edition). By E. V. McCollum. $4.25

A demonstration of the great value of milk and dairy products in the human dietary, which shows how these are to be employed in promoting growth, health and vigor. No technical terms are used, and every conclusion drawn from study of animals is applied to human problems in so striking a manner that the truth of the deductions becomes at once apparent to the reader.

OUR CANDY RECIPES. By May B. Van Arsdale, Day Monroe, and Mary I. Barber. $1.50

Gives a wide range of attractive candies that can be made at home or in the classroom without special training or skill and with simple equipment. The recipes are accurate and simple, yet detailed enough to prevent failures.

CANDY-MAKING REVOLUTIONIZED. By Mary Elizabeth Hall. $1.35

An unusually informing book by the pioneer in the field of candy-making with the use of vegetables. Those who wish to make or encourage their children to make candy that is both healthful and delicious will find this book of supreme utility.

THE AMERICAN FOOD JOURNAL

468 Fourth Ave., New York City.

Enclosed find $.... (Check the book you want)

Name .....

Address .....

City and State .....

Sources of Material

(Continued from page 92)

makes the modern loaf of baker's bread? What is milk bread? What is the nutritive value of "milk bread"? Shall we eat whole wheat or white bread? Is the quality of baker's bread as high as that of home made? Is baker's bread a sanitary product? Today? Why milk in bread?

77. *"Digestibility, Roughage and Vitamins."* Leaflet containing an address before the American Home Economics Association.

78. *"The Bread of Life."* An address before American Bakers' Association Convention.

83. *"Foods That Give Health."* Pamphlet dealing with milk, cereals, breads, meats, leafy and starchy vegetables, fruits, fats, sugars, special foods, vitamins, a mother's dietary needs, growth and muscle building, energy for play, regulation and protection, health rules.

85. *"What Foods Will Keep the Family Well?"* Pamphlet containing outline for planning health menus.

97. *"The Romance of Ice."* Interesting booklet telling how the deeds of olden times have led to present performance in the ice industries.

104. *"Bread as the Physician Sees It."* An address delivered before American Bakers' Association.

108. *"Foods—Facts, Fads and Fancies."* Some helpful information in pamphlet form, presented by the editor of a dietetic magazine.

111. *"Good Pies Easy to Make."* A small booklet giving recipes, a table of oven temperatures, and very good illustrations of the process used in pie making. Exceptionally well prepared.

116. *"Domestic Science Bulletins."* A series of leaflets, arranged as lesson plans, featuring the use of fruit. Numerous recipes. Valuable for home economics classes and teachers of home economics.

131. *"Ice Cream Making in the Home. Some Ice Cream Freezers."* Authoritative information concerning types of ice cream freezers and methods of freezing including recipes for frozen dishes.

151. *"Oleomargarine, Its Purity, Wholesomeness and Economic Importance."* Valuable information concerning the production, food value and economic value of oleomargarine. Prepared by the research department of a trade association.

156. *"Twenty Lessons in Domestic Science."* Suggested lessons for the domestic science teacher. Issued by a baking powder company.

157. *"The Care of the Home Refrigerator." "Where to Place Food in the Household Refrigerator."* Two booklets giving practical and much needed information in a condensed form.

160. *"Baby's Milk."* Directions for preparing milk for the baby. Prepared by an evaporated milk company.

170. *"Sunkist Recipes for Every Day."* Fifty-page illustrated pamphlet giving a variety of recipes and directions for serving fruits. Ten-minute salads and ten-minute desserts are special features. Not furnished in quantity.

178. *"Dainty Desserts."* Leaflet containing recipes suitable for all occasions, with colored illustrations.

179. *"Nurses' Handbook of Recipes for Oranges and Lemons."* Recipes, tested and compiled by experts in convenient notebook form, for beverages, salads, desserts, and quantity recipes.

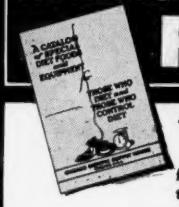
(Continued on page 96)

ARE YOU CONDUCTING HEALTH CLASSES THIS SUMMER?

We have interesting material that will be helpful.

AMERICAN INSTITUTE OF BAKING
1135 Fullerton Av., Chicago, Ill.
Dept. Nutritional Education

Every Teacher Should Have This New Food Catalog FREE



TWENTY-FOUR pages listing the new and approved foods used in the routine treatment of diabetes, obesity and other diseases requiring dietary treatment. Quantitative analysis of foods enables you to advise diets with fine accuracy. Variety and suggestive recipes permit making welcome changes. Written in non-technical text that your patient will understand.

Table of Contents

	Page		Page
Food Ingredients	4-11	Insulin	20
Prepared Foods	12-16	Insulin Equipment	21-22
Literature	17	Testing Apparatus	23
Scales	18-19	Food Chart	24

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From *ONE* package of Knox Gelatine

you can make a Maple Sponge, a Blanc Mange, a Ham Mousse, and a Prune Oriental Cream!

THESE *four* delicious dishes can be made from one single package of Knox Gelatine. That, certainly, is *economy!* And it is the kind of economy that is easy to practice—because Knox Gelatine is an exquisite food. It is the purest of gelatine, without flavoring, coloring or sweetening—"the highest quality for health!" Write for Mrs. Knox's Books. They contain original recipes that will help you entertain—and suggestions that will help you economize.

Any Domestic Science teacher may have sufficient gelatine for her class if she will write on school stationery, stating quantity and when needed.

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111 Knox Avenue Johnstown, N. Y.

[1]

MAPLE SPONGE OR CARAMEL WHIP

(6 Servings)

½ envelope **Knox** Sparkling Gelatine
¾ cup cold water
1½ cups brown or maple sugar
½ cup hot water
2 egg whites. Few grains salt
½ cup nuts, chopped

Soak gelatine in cold water five minutes. Put sugar and hot water in saucepan, bring to boiling point and let boil ten minutes. Pour syrup gradually on soaked gelatine. Cool, and when nearly set, add whites of eggs beaten until stiff, and nut meats. Turn into mold, first dipped in cold water, and chill. Serve with custard made of yolks of eggs, sugar, a few grains of salt, milk and flavoring.

[2]

PRUNE ORIENTAL CREAM

(6 Servings)

½ envelope **Knox** Sparkling Gelatine
¼ cup cold water. ¼ cup scalded milk
½ pint heavy cream. 1/3 cup milk
1/3 cup cooked prunes, cut in pieces
½ cup sugar. Whites of two eggs
1/3 cup chopped figs. Few grains salt

Soak gelatine in cold water five minutes, dissolve in scalded milk, and add sugar. Strain into a bowl, set in pan containing ice water, and stir constantly until mixture begins to thicken; then add heavy cream, diluted with milk and beaten until stiff, prunes and figs, salt, and lastly the whites of eggs beaten very stiff. Turn into a wet mold, the bottom and sides of which are garnished with halves of cooked prunes, and chill. Remove from mold to serving dish and garnish with whipped cream (sweetened and flavored with vanilla), forced through a pastry bag and tube, and chopped pistachio nuts.

[3]

BLANC MANGE

(6 Servings)

½ envelope **Knox** Sparkling Gelatine
2 cups milk. 1/3 cup sugar. Few grains salt
½ teaspoonful vanilla

Soak gelatine in one-half cup of the milk ten minutes. Scald remaining milk with sugar and add soaked gelatine and salt. Strain, cool slightly, add flavoring and turn into wet mold. Chill. Serve with currant or strawberry jelly, or with custard, cream or chocolate sauce. Condensed or evaporated milk may be used, allowing one cup milk and one cup water—with the condensed milk, less sugar will be required. COCOANUT BLANC MANGE: When blanc mange begins to stiffen, add one cup cocoanut. Or, stir in any of the following fruits: sliced oranges, peaches, dates or figs. CHOCOLATE BLANC MANGE: Add two squares melted chocolate or six tablespoonfuls cocoa to the hot milk and two tablespoonfuls more sugar.

[4]

HAM MOUSSE

(6 Servings)

½ envelope **Knox** Sparkling Gelatine
¼ cup cold water
½ cup hot water
2 cups chopped cold boiled ham
1 teaspoonful mixed mustard
Few grains cayenne
½ cup heavy cream, or evaporated milk

Soak gelatine in cold water and dissolve in hot water, and add to chopped or ground ham; when cold add mustard, cayenne, and cream, beaten until stiff. Turn into a mold; first dipped in cold water. Chill, remove from mold to serving dish, and garnish with parsley.

KNOX
SPARKLING
GELATINE
"The Highest Quality for Health"

Double Action Insures Baking Success

For three generations Calumet Baking Powder has enjoyed steadily increasing sales. More and more customers call for Calumet. Every day, Domestic Science teachers, housewives, chefs and bakers decide for themselves that Calumet is the brand best suited for their use — dependable and wholesome, insuring their reputation of being "good cooks."

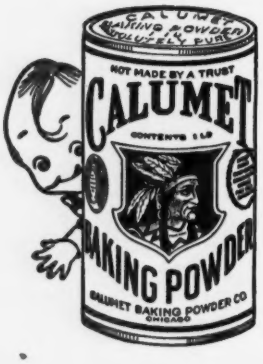
CALUMET

The World's Greatest

Baking Powder

With Calumet, a double acting baking powder, you do not have to use extra care and precaution. You may bake either in a hot or moderate oven with safety — you may move the food in the oven or open the door for inspection without fear of it falling. You may mix a pan of muffins or biscuits at night, put them in the ice chest and they are ready for the oven in the morning.

Double-acting baking powder means a baking powder containing two leavening units: One unit begins to work when the dough is mixed, the other waits for the heat of the oven; then both work together — your guarantee against failure — against waste.



Calumet Baking Powder Company

4100 Fillmore Street

Chicago Illinois

Sources of Material

(Continued from page 94)

Caloric content for each noted. Limited quantities distributed to nurses' classes only.

187. "*'Down East' Recipes.*" Recipes for North Atlantic and Maine Coast fish products and some other high quality canned products of New England specialties. Colored illustrations suggest the most attractive ways of serving these dishes at the table.

191. "*About Cakes and Candies.*" Booklet contains recipes for all occasions:—cinnamon crisps, peanut cookies, white fruit cake and other novelties.

196. "*Frozen Desserts.*" A booklet prepared by a large milk company. Contains some valuable hints as to the use of milk in connection with recipes that call for double cream such as frozen desserts. Also contains directions for freezing ice cream and desserts which require no cooking.

200. "*Care of the Child's Food in the Home.*" Authoritative discussion of importance on refrigeration showing growth of bacteria when proper care is lacking. By Dr. Mary E. Pennington.

215. "*Teacher's Outline for a Domestic Science Course.*" A series of interesting bulletins with lesson plans.

216. "*Tempting Recipes.*" Booklet containing recipes for biscuits, muffins, doughnuts, cakes, cookies, pies, pudding sauces, frostings, and candies.

220. "*Dietetic Bulletins.*" Another series of leaflets, featuring each recipe with its value in calories and grams. For nurses and nurses' classes.

222. "*A Real New England Treat.*" Pamphlet containing recipes on breakfast and luncheon dishes, tea and luncheon sandwiches, dinner dishes and desserts with colored illustration of prepared dishes, based upon a delicious canned brown bread.

227. "*From Pasture to Pantry.*" A booklet telling in detail the story of evaporated milk.

234. "*The Story of California Oranges and Lemons.*" Illustrated thirty-page booklet including early history of the California Citrus Industry.

248. "*Hob o' the Mill.*" The story of oats is told in a special way to interest the children. Attractively illustrated in color.

249. "*The Romance of Cheese.*" The history of cheese is presented briefly. Varieties of cheese are given with description and manufacture. Booklet also has many illustrations.

250. "*Dry Skim Milk.*" Large booklet telling all about dry skim milk and featuring the journey of dry skim milk in illustrations.

251. "*Sandwich Suggestions.*" Several pages containing recipes for sandwich fillings.

252. "*Meat Cuts Identification Charts.*" A set of four cards in convenient size. Veal Chart; Lamb Chart; Beef Chart; Fresh Pork Chart.

253. "*Meats Cooked in Milk.*" A leaflet giving some interesting recipes for the preparation of meats and fish cooked in milk and some suggestions for ways to give the family the milk they need.

254. "*Milk to Drink.*" Formulae for tempting milk and fruit juice drinks which appeal particularly to children and help to get them to take all the milk they ought to have.

255. "*Saves Butter in Your Cooking.*" A leaflet containing suggestions for preparing creamed and scalloped vegetable dishes with evaporated milk.

256. "*For Puddings, Pies and Custards.*" A half dozen tested recipes for delicious desserts prepared with evaporated milk.

257. "*Suggestions for the Diet Laboratory.*" Gives a recipe for the economical and convenient preparation of acidophilus milk using evaporated milk for the necessary sterilized milk basis. Also recipes for the preparation of high-caloric foods, using undiluted evaporated milk.

258. "*Junket in Dietetics.*" A most interesting and helpful booklet on the value of milk in the diet, and the advantages of junket as a health food; prepared by the Director of Dietetics in a well known sanitarium.

259. "*Junket Recipes.*" A very popular booklet of delightful new desserts, including also suggestions for dainty menus, and directions for making cottage cheese, ice creams and baby foods with junket.

260. "*The Princess and the Magic Junket.*" The delightful story of a little princess in a tiny book illustrated with quaint pictures that children "love" almost as well as they do junket.

261. "*A Dozen New Ways to Use Milk.*" A very helpful little book regarding milk, which includes twelve recipes for attractive new UNCOOKED milk desserts that can be prepared easily and quickly.

262. "*The Story of Cheese.*" Intensely interesting description of some of the world's most famous cheeses, where they are made and how, with specific instructions for home use in cheese making. Prepared by a cheese expert and usually sold for 50c. Sent free on request.

263. "*The Composition and Food Value of Margarine.*" Booklet telling about the history of margarine.

264. "*Answering Bread Criticisms.*" Leaflet containing a laboratory study of bread.

65. "*White Bread.*" Leaflet telling the role of white bread in nutrition.